

# Notice of Allowability

Application No.

09/510,629

Examiner

Eduardo Garcia-Otero

Applicant(s)

HARTMANN, WILLIAM M.

Art Unit

2123

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received 8/6/04.
2. ☒ The allowed claim(s) is/are 1-9, 21 and 23-26.
3. ☒ The drawings filed on 22 February 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
KEVIN J. TESKA  
SUPERVISORY  
PATENT EXAMINER

## ALLOWANCE

### *Introduction*

1. Title is: PROCESS FOR HIGH FIDELITY SOUND RECORDING AND REPRODUCTION OF MUSICAL SOUND.
2. First named inventor is: HARTMANN
3. Claims 1-9, 21, and 23-26 are pending, and are allowed
4. This action is in response to the amendment received 8/6/04.
5. US application was filed 2/22/2000, and no earlier priority is claimed.

### *Index of Important Prior Art and Definitions*

6. Carver refers to US Patent 4,309,570 (from IDS).
7. Aronis refers to US Patent 4,175,466.
8. Logue refers to US Patent 6,279,379.
9. Sakai refers to US Patent 6,526,849.
10. Krauss refers to US Patent 2,806,953.
11. Sims refers to US Patent 5,206,913.
12. Tucker refers to The Computer Science and Engineering Handbook, by Allen B. Tucker, CRC Press, ISBN: 0-8493-2909-4, 1996, pages 1557-1559, and 1354-1360.
13. Illustrated Oxford Dictionary refers to Illustrated Oxford Dictionary, Oxford University Press, 1998, ISBN 0-7894-3557-8, pages 270 and 667:
  - ensemble:** "a group of actors, dancers, musicians, etc., performing together..." page 270.
  - quartet:** "composition for four voices or instruments... the performers of such a piece", at page 667.
14. McGraw-Hill Dictionary refers to The McGraw-Hill Dictionary of Scientific and Technical Terms, Fourth Edition, by McGraw-Hill Companies, Inc., ISBN 0-07-045270-9, 1989:
  - contact microphone:** "[ENG ACOUS] A microphone designed to pick up mechanical vibrations directly and convert them into corresponding electrical currents or voltages."
  - pickup:** "A device that converts a sound, scene, measurable quantity, or other form of intelligence into a corresponding electrical signals, as in a microphone, phonograph pickup, or television camera."

**scale:** “graduated series of musical tones ascending or descending in order of pitch according to a specified scheme of their intervals”.

**inversion:** “... [COMMUN] The process of scrambling speech for secrecy by beating the voice signal with a fixed, higher audio frequency and using only the difference frequencies”

15. Webster refers to Merriam-Webster’s Collegiate Dictionary, Tenth Edition, Merriam-Webster, 2000, ISBN 0-87779-708-0:

**ensemble:** “concerted music of two or more parts... the musicians engaged in the performance of a musical ensemble”

**octave:** “a musical interval embracing eight diatonic degrees... a tone or note at this interval... the harmonic combination of two tones an octave apart... the whole series of notes, tones, or digitals comprised within this interval and forming the unit of the modern scale... the interval between two frequencies (as in an electromagnetic spectrum) having a ratio of 2 to 1”.

**invert:** “to turn inside out or upside down”

***Applicant Remarks***

16. All prior rejections and objections are withdrawn due to Applicant’s amendments and cancellations.

***Claim Interpretation***

17. The claim language is interpreted in light of the specification. Limitations from the specification must not be imported into the claims, but definitions from the specification must be imported into the claims.
18. Claim 1 (currently amended) states “signal generation system for simultaneously generating contact recording signals based on vibrations”, and Claim 5 states “contact transducer”. These terms are interpreted as “contact microphones”, which are defined by the McGraw-Hill Dictionary as “[ENG ACOUS] A microphone designed to pick up mechanical vibrations directly and convert them into corresponding electrical currents or voltages.”
19. Also, “microphone” by itself is interpreted as an ordinary audio (sound-waves-in-air type) microphone, in contrast to “contact microphone”.

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***REASONS FOR ALLOWANCE***

20. Independent claim 21 (currently amended) is allowable because the combination of limitations is non-obvious.
21. Specifically, the use of two multi-driver speaker systems, where each multi-driver speaker system simulates the frequency and polar radiation pattern emanating from a single musical instrument is non-obvious.
22. The Applicant has amended claim 21 (currently amended) to incorporate the language suggested by the prior office action paragraphs 117 through 123, and has amended claim 21 (currently amended) to delete the indefinite terminology. Note that specification page 10 states "the frequency dependence of the radiation from front and back surfaces is approximated by using separate loudspeaker drivers... polar radiation pattern".
23. All other pending claims are allowable because they contain the same limitations, or depend directly or indirectly from claims containing the same limitations.

***Conclusions***

24. All pending claims are allowed.
25. All prior rejections and objections are withdrawn.

***Communication***

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 571-272-3711. The examiner can normally be reached on Monday through Thursday from 9:00 AM to 8:00 PM. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at 571-272-3761. The fax phone number for this group is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

\* \* \* \* \*



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